

**CALENDAR ITEM
C24**

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PRC 3277.1

A. Franzoia

**TERMINATION OF A GENERAL LEASE – RIGHT-OF-WAY USE AND ISSUANCE OF
A GENERAL LEASE – RIGHT-OF-WAY USE**

LESSEE/APPLICANT:

Chevron U.S.A., Inc.

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

Sovereign land in Honker Bay, Solano and Contra Costa Counties; Roaring River Slough, Montezuma Slough, and Grizzly Slough, Solano County; and the Sacramento River, Yolo and Sacramento Counties.

AUTHORIZED USE:

Continued use and maintenance of an existing 8-inch-diameter refined petroleum products pipeline, the decommissioning and abandonment-in-place of pipeline segments, construction of a temporary work platform, installation of temporary pilings and buoys, and installation of a new horizontal directional drilled (HDD) 8-inch-diameter pipeline, and placement of articulated concrete blankets over the pipeline tie-ins. The decommissioned and abandoned-in-place segments of the pipeline will remain under lease.

LEASE TERM:

25 years, beginning October 13, 2016

CONSIDERATION:

\$9,511 per year, with an annual Consumer Price Index adjustment, and with the State reserving the right to fix a different rent periodically during the lease term, as provided in the lease.

SPECIFIC LEASE PROVISIONS:

Insurance:

Liability insurance in an amount no less than \$10,000,000 per occurrence. Applicant may satisfy all or part of the insurance

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requirements through maintenance of a staff-approved self-insurance program as outlined in the lease.

Bond: \$150,000

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, and 6501.1; California Code of Regulations, title 2, section 2000, subdivision (b).

Environmental Review:

For the new lease, the Commission is the lead agency for the Project pursuant to CEQA (Pub. Resources Code, § 21000 et seq.) and conducted an Initial Study to determine if the Project may have a significant effect on the environment (State CEQA Guidelines, § 15063). Although the Initial Study identified several potentially significant impacts to Aesthetics, Biological Resources, Cultural and Paleontological Resources, Hazards and Hazardous Materials, Hydrology and Water Resources, and Land Use and Planning, mitigation measures were proposed and agreed to by the Applicant prior to public review that would avoid or mitigate the identified potentially significant impacts “to a point where clearly no significant effects would occur” (State CEQA Guidelines, § 15070, subd. (b)(1)). Consequently, the Initial Study concluded that “there is no substantial evidence, in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment” (State CEQA Guidelines, § 15070, subd. (b)(2)), and a Mitigated Negative Declaration (MND) was prepared.

Pursuant to the Commission’s delegation of authority and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15025), staff prepared an MND identified as CSLC MND No. 789, State Clearinghouse No. 2016072038. The MND and Initial Study were circulated for a 30-day public review period from July 15, 2016, to August 19, 2016.

Commission staff received one comment letter on the MND, from the California Department of Fish and Wildlife (CDFW). CDFW staff provided the following recommendations: to incorporate a daily work window beginning 30 minutes after sunrise and ending 30 minutes before sunset at the North Work Area; to restrict 24-hour work windows to specific key phases of the Project; to perform pre-construction species-focused

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protocol-level field surveys to determine whether an Incidental Take Permit is needed (or obtain an Incidental Take Permit); to install salt marsh harvest mouse exclusion fencing in the North Work Area immediately when water level reductions allow access to the Project area; to incorporate wildlife clearance surveys and biological monitoring during vegetation trimming and work pad installation; to include a non-native vegetation disposal and management plan; and to incorporate mitigation measures (MMs) to avoid impacts to fish from pile driving activities.

In response to this comment letter, Commission staff revised the following:

- Table 1-1 to include that an Incidental Take Permit would be obtained if required from CDFW for potential effects to listed species.
- MM BIO-3 to clarify that salt marsh harvest mouse exclusion fencing would be installed in the North Work Area immediately when water level reductions allow access to the Project area.
- MM BIO-5 to clarify that a biological monitor would be present during vegetation trimming, pursuant to MM BIO-2.

Additional comments from CDFW staff did not result in revisions to the MND and are discussed below:

Regarding the daily work window recommendation, the Project is proposed to be conducted between 7 a.m. and 7 p.m. beginning in May 2017 and ending in July 2017. Given the times the sun rises and sets in early May (e.g. 6:13 a.m. and 8:01 p.m.) and late July (e.g. 6:13 a.m. and 8:19 p.m.), the proposed construction hours are at least 30 minutes after sunrise and 30 minutes before sunset; therefore, no revisions are necessary.

Regarding the recommendation to restrict 24-hour work windows to key Project phases, the MND describes that the only activities that would occur outside of the 7 a.m. to 7 p.m. work window are hydrostatic testing, pipe tie-ins, and the installation of the replacement pipe. When night-lighting is needed during these key Project phases, the MMP requires that lights be shielded and directed downward toward the work area (MM AES-1). Therefore, no revisions are necessary.

Regarding the recommendation to incorporate wildlife clearance surveys and biological monitoring during the work pad installation, the MMP

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requires that a biological monitor supervise all pre-construction and construction activities (MM BIO-2), which includes the installation of the work pad within the exclusion fencing. Therefore, no revisions are necessary.

Regarding the non-native vegetation disposal and management plan recommendation, the MMP requires the development and implementation of a revegetation and monitoring plan (MM BIO-6) that includes a stipulation of no increase in invasive, non-native species relative to the adjacent undisturbed areas. If monitoring of the site detects an increase in invasive species, then remedial actions would take place as part of contingency measures to remove invasive species until the plan's performance criteria are met. Therefore, no revisions are necessary.

Regarding the recommendation to incorporate measures and noise limitations specified in the California Department of Transportation's Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish, this document was used as a resource in the noise analysis presented in the MND. The technical guidance document states that "There are no established injury criteria for vibration pile driving, and resource agencies in general are not concerned that vibratory pile driving will result in adverse effects on fish." In the MND, the cumulative noise threshold for impulse noise was used in the absence of an established threshold for vibratory noise, which is a very conservative approach. The noise criteria for injury to fish would not be exceeded by impact or vibratory pile driving activities, and no physical injury to fish is expected. Fish may experience behavioral disturbance as a result of pile driving activities (vibratory and impact [but only for the steel drill casing]), but only near the pile being driven. For example, the steel drill casing, which would be installed using a type of impact pile driver, would only exceed the behavioral disturbance threshold, and only for fish that remain within 40 feet of the drill casing for the duration of the operation. The MMP requires the use of the pile driving soft-start technique (MM BIO-9), where pile driving would be ramped up gradually in an effort to alert fish to the presence of such activities and enable fish to move away. With the implementation of this measure, any potential behavioral impact would be reduced to a less than significant level. Therefore, no revisions are necessary.

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Commission staff also proactively engaged with representatives of the Yocha Dehe Wintun Nation regarding their cultural resources interests in the Project area. Staff accompanied representatives of the Yocha Dehe Wintun Nation on a Project site visit and requested input from the Tribe on the proposed mitigation measures related to cultural and paleontological resources. Based on the Tribe's feedback, a 100-foot work-stoppage buffer is included for cultural and paleontological discoveries during all earth-disturbing work (MM CUL-1 and MM CUL-2).

Staff determined that these changes do not constitute a substantial revision, as defined in State CEQA Guidelines section 15073.5, subdivision (b), and that recirculation of the MND prior to Commission consideration is not required pursuant to in State CEQA Guidelines section 15073.5, subdivision (c).

Based upon the Initial Study, the MND, and the comments received in response thereto, there is no substantial evidence that the Project will have a significant effect on the environment; California Code of Regulations, title 14, section 15074, subdivision (b). A Mitigation Monitoring Program has been prepared in conformance with the provisions of CEQA (Pub. Resources Code, § 21081.6), and is contained in Exhibit C, attached hereto.

Public Trust and State's Best Interests Analysis:

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes that include, but are not limited to, waterborne commerce, navigation, fisheries, water-related recreation, visitor-serving amenities, habitat preservation, and open space. The Commission is the trustee of the State's sovereign lands and Public Trust easements over lands within the lease area.

The Commission's responsibility as trustee of the sovereign lands subject to the common law Public Trust Doctrine is to determine if a particular use is consistent with the public need for the lands. That trust also requires the Commission to take action to protect and preserve those lands and to prevent any unauthorized use that deprives the public of access to or use of the land.

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On April 29, 1965, the Commission authorized five General Leases – Right-of-Way Use (Lease Nos. PRC 3277.1, PRC 3278.1, PRC 3279.1, PRC 3280.1, and PRC 3281.1), to Standard Oil of California for crossings of Montezuma Slough, Honker Bay, Roaring River Slough, Grizzly Slough, and the Sacramento River, for one or more submarine pipelines. The five crossings are part of the Bay Area Products Line (BAPL) that delivers refined petroleum products (gasoline, diesel, and jet fuel) to Chevron U.S.A., Inc.'s (Chevron) Sacramento Terminal, which is located adjacent to Miller Park and the Sacramento River at the foot of Broadway. The pipeline installation was completed in 1966. On October 28, 1976, Standard Oil of California assigned its interest in the five leases to Chevron U.S.A., Inc., the Applicant.

On July 10, 1997, on the south side of the Honker Bay ship crossing, a ship lost power and dropped its anchor in the No Anchor Zone to avoid running aground. The anchor caught and displaced the pipeline lifting it from its trench, however, no leaks resulted from the accident and Chevron implemented a short-term solution to protect and stabilize the pipeline.

On June 19, 1998, the Commission authorized a new General Lease – Right-of-Way Use to the Applicant and consolidated the five leases into PRC 3277.1, which expires April 30, 2022.

On June 14, 1999, the Commission authorized an amendment of lease to abandon-in-place a portion of the pipeline damaged on the north side of Honker Bay in 1997, and to install a new HDD pipeline within the existing right-of-way.

Recent inspections of the Pittsburg-to-Sacramento lateral pipeline, installed in 1966, identified anomalies (i.e., minor imperfections of the pipe's walls) in the pipeline. To eliminate the anomalies, Chevron proposes to replace an approximately 1.2-mile segment of the pipeline that runs through Roaring River Slough, Grizzly Slough, and a small portion of Honker Bay and the adjacent Suisun Marsh, in an area known as Mallard Farms, with a pipeline segment of the same size as the existing pipeline. The Project would not increase the capacity or throughput of the BAPL. Until permits are obtained, Chevron is implementing measures, communicated and agreed to by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) and

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California State Fire Marshal, to lower the operating pressure and flow rate of the line.

The Applicant is applying for a lease to continue the use and maintenance of the existing 8-inch-diameter refined petroleum products pipeline, abandon segments of the pipeline in place, and install temporary work platforms, sheet piles, pilings, and buoys in Honker Bay for installation of a new HDD pipeline segment 75 feet below the beds of Roaring River Slough, Grizzly Slough, and a small portion of Honker Bay and Suisun Marsh. The new segment of pipe will be tied into the existing pipeline by lifting the existing pipeline onto a barge in Honker Bay where it will be cut and welded to the newly installed HDD pipeline then lowered to the bay floor in a new parallel alignment to the existing pipeline. The abandoned portion of the existing pipeline will be slurry filled, capped, and laid on the bay floor in its existing alignment. An articulated concrete mat will be placed on the spliced pipeline and abandoned pipeline segment for protection. Upon the completion of the Project, the temporary pilings, sheet piles, buoys, and work platform will be removed at the end of the installation.

Abandonment-in-place of the existing pipeline segment under Roaring River Slough, Grizzly Slough and a portion of Honker Bay and the Suisun Marsh is preferable to full removal because of the significant environmental impacts associated with removal. Removal would require open-trenching along the 7,000-foot-long pipeline alignment within Roaring River Slough, Grizzly Slough, and a portion of Honker Bay within the Commission's jurisdiction and through a portion of Suisun Marsh outside of the Commission's jurisdiction. Removal of marsh vegetation along the pipeline route would be required to access the existing pipeline for removal. In open water areas, cofferdams would be required to provide a dry work space to conduct the open trenching. The installation of cofferdams would necessitate driving steel coffer dam plates, dewatering, and bringing in barges for excavation equipment. In drier areas of the marsh, construction of access roads to bring in excavation equipment would be required resulting in impacts to approximately 10 acres of Suisun Marsh habitat and sensitive resources. In contrast, abandonment-in-place requires no additional work in Roaring River Slough, Grizzly Slough, a portion of Honker Bay, or Suisun Marsh, thus eliminating any potential harm to water quality or habitat from removal operations.

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The proposed lease includes provisions requiring the lessee to inspect, repair, insure, and indemnify the State for all facilities abandoned-in-place. In addition, Commission staff believes that the use does not substantially interfere with the Public Trust needs and values at this location because the existing pipeline is buried and will have a negligible, if any, impact on the recreational use of Roaring River Slough, Grizzly Slough, or Honker Bay.

The HDD pipeline method for installing the replacement pipeline segment, with subsequent abandonment-in-place of the existing line, is recommended over an open trenching installation method to minimize overall Project impacts to the Suisun Marsh.

This proposed Project will satisfy PHMSA and California State Fire Marshal pipeline safety requirements, eliminate the existing anomalies, improve the pipeline's safety from anchor snags by placement of articulated concrete blankets over the pipeline tie-ins, and reduce the potential for product delivery interruptions. The lease also requires the payment of annual rent to compensate the people of the State for the occupation of the public land involved. The proposed lease would require the lessee to carry liability insurance and indemnify the State for any liability incurred as a result of the lessee's activities thereon in addition to remaining liable for the abandoned pipeline.

For all the reasons above, staff believes the issuance of this lease is consistent with the common law Public Trust Doctrine at this location at this time and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. Applicant has the right to use the upland adjoining the lease premises.
2. The Pittsburg-to-Sacramento BAPL is regularly inspected and monitored to ensure pipeline integrity. The pipeline is regulated by California Department of Transportation, PHMSA, and the California Office of the State Fire Marshal. The pipeline is smart pigged every five years to monitor pipeline integrity. The last internal inspection was completed in 2013. Based on the results of that inspection, the only section of pipe needing repair or replacement is the section the Applicant is requesting authorization for at this time. The next scheduled inspection is in 2018. In addition to regular tool runs, Chevron continuously monitors the pipeline to

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ensure proper operation in conformance with their Pipeline Integrity Management Program with regular right-of-way patrols, and 24-hour pressure sensing for early leak detection. Operators are available 24 hours a day to review real time data to identify and prevent incidents before they occur. In addition to Chevron's Pipeline Integrity Management Program, they must abide by California Senate Bill 295, which was approved by the Governor on October 8, 2015, requiring the California Office of the State Fire Marshal to audit the pipeline system annually.

3. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction; and Strategy 1.5 to ensure the highest level of environmental protection and public safety in the production and transportation of oil and gas resources.
4. The decommissioned and abandoned-in-place segments of the pipeline will remain under lease, with Chevron maintaining liability insurance and indemnifying the State.
5. Termination of the lease is not a project as defined by the California Environmental Quality Act (CEQA) because it is an administrative action that will not result in direct or indirect physical changes in the environment.

Authority: Public Resources Code section 21065 and California Code of Regulations, title 14, section 15378, subdivision (b)(5).

6. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS OBTAINED:

National Marine Fisheries Service

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FURTHER APPROVALS REQUIRED:

U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
California Department of Fish and Wildlife
San Francisco Bay Conservation and Development Commission
San Francisco Bay Regional Water Quality Control Board
California Department of Water Resources

EXHIBITS:

- A. Land Description
- B. Site and Location Map
- C. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Certify that the MND, CSLC MND No. 789, State Clearinghouse No. 2016072038, was prepared for this Project in compliance with the provisions of CEQA, that the Commission has reviewed and considered the information contained therein and in the comments received in response thereto and that the MND reflects the Commission's independent judgment and analysis.

Adopt the MND and determine that the Project, as approved, will not have a significant effect on the environment.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

- 1. Authorize termination, effective October 12, 2016, of Lease No. PRC 3277.1, a General Lease – Right-of-Way Use, issued to Chevron, U.S.A., Inc.

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2. Authorize issuance of a General Lease – Right-of-Way Use, Lease No. PRC 3277.1, to Chevron U.S.A., Inc., beginning October 13, 2016, for a term of 25 years, for the continued use and maintenance of an existing 8-inch-diameter refined petroleum products pipeline, the decommissioning and abandonment-in-place of pipeline segments, construction of a temporary work platform, installation of temporary pilings and buoys, and installation of a new horizontal directional drilled 8-inch-diameter pipeline, and placement of articulated concrete blankets over the pipeline tie-ins, with the decommissioned and abandoned-in-place segments of the pipeline to remain under lease; annual consideration of \$9,511 per year, with an annual Consumer Price Index adjustment and with the State reserving the right to fix a different rent periodically during the lease term, as provided in the lease; liability insurance in an amount no less than \$10,000,000 per occurrence or equivalent staff-approved self-insurance program; and surety in an amount no less than \$150,000.

EXHIBIT A

PRC 3277.1

LAND DESCRIPTION

Five (5) parcels of tide and submerged lands along a pipeline as shown on map entitled "Pipeline San Francisco Area", dated August 28, 1969, No. PL SK 69-5, a copy of which is located in State Lands Commission file WP 3277, more particularly described as follows:

PARCEL 1

A strip of tide and submerged land 25 feet wide across the bed of Montezuma Slough approximately one mile south of Mein's Landing, Solano County, California, said strip lying 12.5 feet on each side of the following described center line:

BEGINNING at a point on the southerly bank of Montezuma Slough which bears S 8°00'19"W 7,419.95 feet from U.S.C.&G.S. triangulation station "Meins 2", said station having California Zone 3 coordinates of X = 1,596,701.75 and Y = 599,696.59; thence from the point of beginning N 23°19'18"E approximately 320 feet to the northerly bank of Montezuma Slough; containing 0.184 acre more or less.

EXCEPTING THEREFROM any land lying above the ordinary high water mark of Montezuma Slough.

Bearings and distances used in the above description are based on the California Coordinate System Zone 3.

PARCEL 2

A strip of tide and submerged land 100 feet wide in Suisun Bay and Honker Bay at their junction with the Sacramento River, Contra Costa and Solano Counties, approximately 3 miles west of Pittsburg, California, said strip lying 35 feet westerly and 65 feet easterly of the following described line:

BEGINNING at a point on the mean high tide line of Suisun Bay which bears N 6°48'44"E 7,278.85 feet more or less from Shell Oil Company water tank, said water tank having California Zone 3 coordinates of X = 1,584,136.14 and Y = 559,631.32; thence from the point of beginning leaving the mean high tide line N 10°53'00"E 300.00 feet and N 19°40'04"E approximately 12,575 feet to the southerly high water mark of Honker Bay.

SUBJECT TO the effect of the decree in the judgment quieting title in Solano County Superior Court Case No. 16074, Homer S. King v. State of California.

The bearings and distances used in the above description are based on the California Coordinate System Zone 3.

PARCEL 3

A strip of tide and submerged land 25 feet wide across the bed of the Sacramento River situate near Frederick A. Miller Park, Sacramento and Yolo Counties; said strip lying 12.5 feet on each side of the following described center line:

BEGINNING at a point on the right bank of the Sacramento River which bears N 44°16'15"E 163.91 feet from an iron pipe designated R.E. 53 and having California Zone 2 coordinates of $X = 2,138,327.40$ and $Y = 324,959.69$; thence from said point of beginning N 47°45'42"E approximately 600 feet to the left bank of the Sacramento River, containing 0.344 acre more or less.

EXCEPTING THEREFROM any land, if any, lying above the ordinary high water mark of the Sacramento River.

Bearings and distances used in the above description are based on the California Coordinate System Zone 2.

PARCEL 4

A strip of land 25 feet wide and approximately 100 feet in length across the bed of Grizzly Slough, Solano County, extending from the mean high tide line on the right bank to the mean high tide line on the left bank, the center line of said strip being a line having a bearing of N 25°32'04"E and being distant at right angles 458.74 feet from U.S.C.&G.S. triangulation station "Wheeler", said station having California Zone 3 coordinates of $X = 1,588,837.86$ and $Y = 579,114.76$, containing 0.057 acre more or less.

Bearings and distances used in the above description are based on the California Coordinate System Zone 3.

PARCEL 5

A strip of land 25 feet wide and approximately 100 feet in length across the bed of Roaring River Slough, Solano County, extending from the mean high tide line on the right bank to the mean high tide line on the left bank, the center line of said strip being a line having a bearing of N 25°32'04"E

and being distant at right angles 458.74 feet from U.S.C.&G.S. triangulation station "Wheeler", said station having California Zone 3 coordinates of $X = 1,588,837.86$ and $Y = 579,114.76$, containing 0.057 acre more or less.

Bearings and distances used in the above description are based on the California Coordinate System Zone 3.

END OF DESCRIPTION

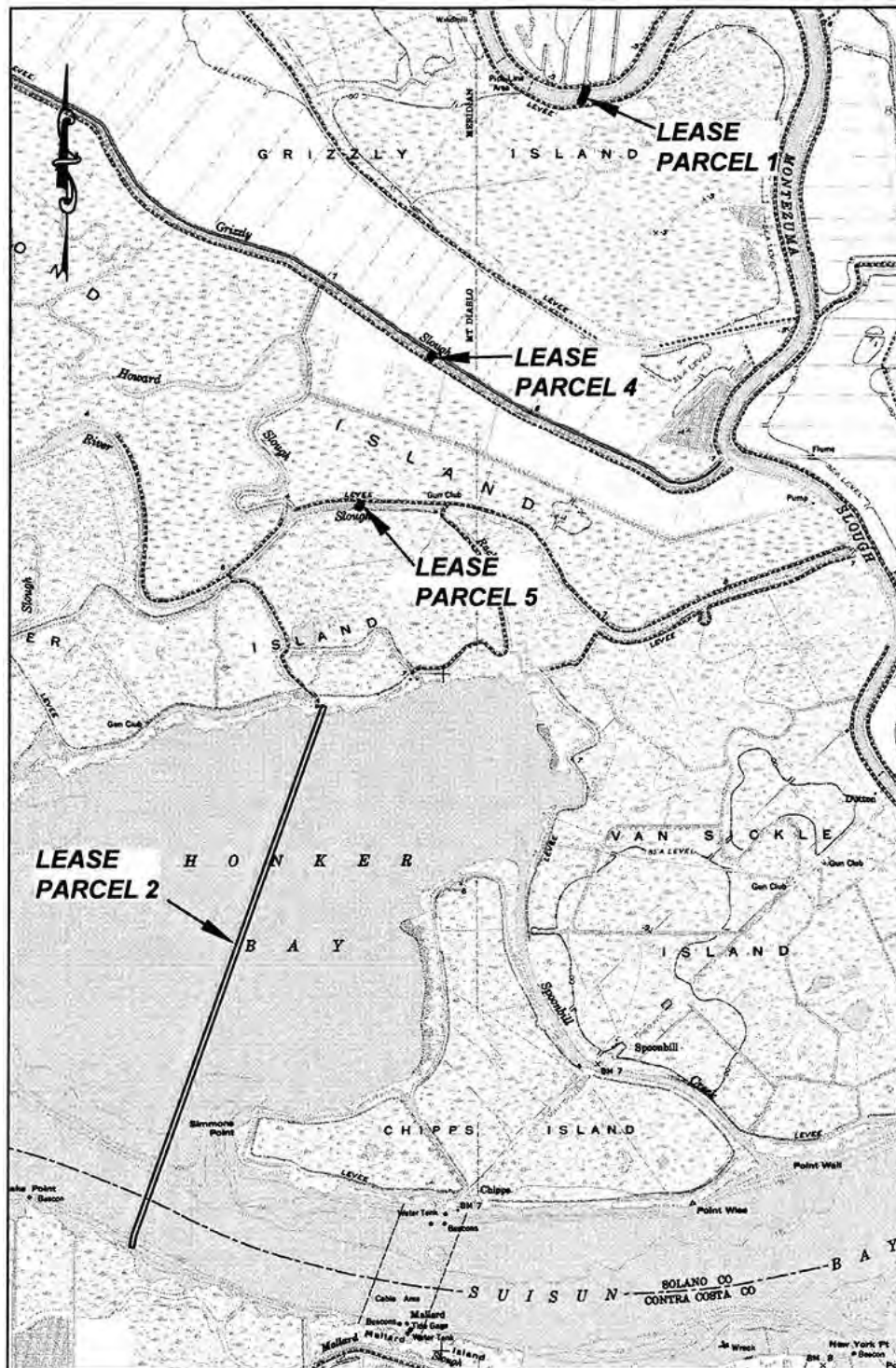
PREPARED DECEMBER 4, 1980 BY TECHNICAL SERVICES UNIT, ROY MINNICK, SUPERVISOR.

PARCEL 2 of the above description revised by California State Lands Commission Boundary Unit on September 22, 2016.



NO SCALE

SITE



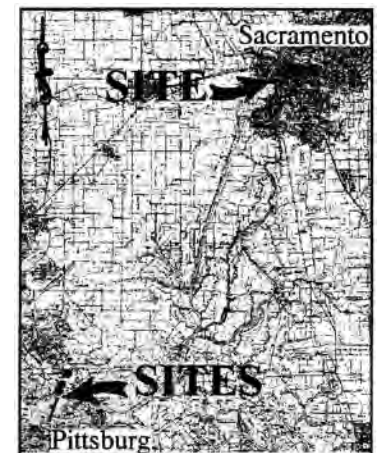
HONKER BAY, ROARING RIVER SLOUGH, GRIZZLY SLOUGH, MONTEZUMA SLOUGH & SACRAMENTO RIVER

MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.



NO SCALE



LOCATION

Exhibit B

PRC 3277.1

CHEVRON U.S.A. INC.
GENERAL LEASE-
RIGHT-OF-WAY USE
CONTRA COSTA, SOLANO,
SACRAMENTO & YOLO
COUNTIES



TS 09/22/16

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

MALLARD FARMS PIPELINE REPLACEMENT PROJECT
(State Clearinghouse No. 2016072038)

The California State Lands Commission (Commission) is the lead agency under the California Environmental Quality Act (CEQA) for the Mallard Farms Pipeline Replacement Project. In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a) and State CEQA Guidelines sections 15091, subdivision (d) and 15097.

The Project authorizes Chevron Pipe Line Company (Applicant) to replace an approximately 1.2-mile segment of the Bay Area Products Line pipeline that runs from Pittsburg to Sacramento through Mallard Farms using horizontal directional drilling.

PURPOSE

It is important that significant impacts from the Project are mitigated to the maximum extent feasible. The purpose of a MMP is to ensure compliance and implementation of MMs; this MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

ENFORCEMENT AND COMPLIANCE

The Commission is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

MONITORING

Commission staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions, cities, and/or the California Department of Fish and Wildlife. The Commission and/or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To ensure implementation and success of the MMs, an environmental monitor must be on-site during all Project activities that have the potential to create significant environmental impacts or impacts for which mitigation is required. Along with Commission staff, the environmental monitor(s) are responsible for:

- Ensuring that the Applicant has obtained all applicable agency reviews and approvals;
- Coordinating with the Applicant to integrate the mitigation monitoring procedures during Project implementation; and
- Ensuring that the MMP is followed.

The environmental monitor shall immediately report any deviation from the procedures identified in this MMP to Commission staff or its designee. Commission staff or its designee shall approve any deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. The following actions shall be taken to ensure successful implementation.

- Relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. A monitoring record form shall be submitted to the Applicant, and once the Project is complete, a compilation of all the logs shall be submitted to Commission staff. Commission staff or its designated environmental monitor shall develop a checklist to track all procedures required for each MM and shall ensure that the timing specified for the procedures is followed. The environmental monitor shall note any issues that may occur and take appropriate action to resolve them.

Public Access to Records. Records and reports are open to the public and would be provided upon request.

MITIGATION MONITORING TABLE

This section presents the mitigation monitoring table (Table C-1) for the following environmental disciplines: Aesthetics, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Land Use and Planning. All other environmental disciplines were found to have less than significant or no impacts and are, therefore, not included below. The table lists the following information by column:

- Potential Impact;
- Mitigation Measure (full text of the measure);
- Location (where impact occurs and MM should be applied);
- Monitoring/Reporting Action (action to be taken by monitor or Lead Agency);
- Timing (before, during, or after construction; during operation, etc.);
- Responsible Party; and
- Effectiveness Criteria (how the agency can know if the measure is effective).

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Aesthetics						
Create a new source of substantial light or glare	MM AES-1: Night-Lighting Spillage Minimization. Night-lighting required during pipe pullback activity shall be shielded and directed downward toward the work area to minimize light trespass to adjacent areas.	North and South Work Areas	Observe nighttime lighting positioning for compliance	Throughout construction	Applicant and CSLC	Off-site light spillage minimized
Biological Resources						
Special-status species and habitat	MM BIO-1: Environmental Awareness Training. Chevron Pipe Line Company (CPL) shall ensure that all construction personnel receive mandatory environmental awareness training. The training shall be provided by a qualified biologist, approved by California State Lands Commission (CSLC) staff, prior to start of construction activities, and as new personnel are added to the Project. The environmental awareness training shall familiarize workers with the special-status species and their habitats, explain the regulatory requirements to protect special-status species, and describe measures that must be implemented to avoid and minimize impacts (including observing posted speed limits and maintaining a 15-mile-per-hour limit on unpaved roads). The training materials shall be developed and submitted to CSLC staff for approval at least 3 weeks prior to start of Project activities. CPL shall identify a representative as the person for any employee or contractor to contact if a special-status species is observed, and shall provide the contact information for both this representative and the qualified biologist to U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and CSLC staffs before construction commences. The qualified biologist shall maintain a list of contractors who have received training and shall submit a summary of the awareness training to CSLC staff within 30 days after construction begins and after construction is completed.	N/A	Document training	Prior to construction	Applicant and CSLC	Educate workers on the potential for special-status species and their habitats, explain the regulatory requirements to protect special-status species, and describe measures that must be implemented to avoid and minimize impacts

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<p>MM BIO-2: Biological Monitoring and Surveying. Chevron Pipe Line Company (CPL) shall ensure that the following surveys and/or monitoring activities are conducted. Surveys shall be conducted by a qualified biologist, approved by California State Lands Commission (CSLC) staff in consultation with California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), or National Marine Fisheries Service (NMFS) staffs.</p> <ul style="list-style-type: none"> • <u>Pre-Construction Surveys</u>: A pre-construction survey shall be conducted within 15 days prior to the start of construction at the North Work Area and staging areas to ensure that no sensitive species are present. • <u>Plant Surveys</u>: Rare plant surveys shall be conducted during the appropriate blooming period. If any rare plants are identified, they shall be flagged or fenced for avoidance. • <u>Biological Monitoring during Construction</u>: An approved qualified biologist shall be on-site during all ground-disturbance activities at the North Work Area. The biologist shall survey the work area before the start of ground breaking activities each day. The biologist shall have the authority to stop activities in the event that a special-status species is observed. In the event that a special-status species is encountered in the Project area during Project activities, associated work activities at the location shall be halted immediately and CPL shall contact the appropriate agency (i.e., CDFW, USFWS, NMFS) and CSLC staff to discuss ways to proceed with the Project. Monitoring results shall be summarized in a monthly report and provided to CSLC staff during construction. • <u>Migratory Bird Monitoring and Protection Measures</u>: For work conducted within the migratory bird 	North Work Area	Obtain monitoring results summarized in monthly reports provided to CSLC staff during construction	Pre-construction and throughout construction	Applicant and CSLC	Sensitive species avoided and/or protected throughout construction

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<p>breeding season (February 15 and August 31), the approved qualified biologist shall complete nesting bird surveys within 15 days prior to Project implementation to determine if migratory birds protected under the Migratory Bird Treaty Act (MBTA) are nesting in the Project area. Nest surveys shall follow standard biological survey methods, and shall be tailored to detect specific species, with visits planned at appropriate time frames/intervals to detect nesting activity. If nests are found, the Project biologist shall establish an appropriate buffer to be in compliance with the MBTA. To prevent encroachment, the established buffer(s) shall be clearly marked for avoidance and shall remain in effect until the young have fledged or the nest has been abandoned, as confirmed by the Project biologist.</p> <ul style="list-style-type: none"> • If active nests are identified during construction within 50 feet of the North Work Area (or other distance determined through consultation with the USFWS), a biological monitor shall conduct regular (no less than twice per week) surveys of each active nest to monitor the behavior of the nesting bird for signs of stress or potential nest failure. The nest survey must be conducted during active construction, when construction noise is present, and be of sufficient duration to make an appropriate assessment (up to 1 hour). The biological monitor shall take care to not cause nest disturbance during monitoring. Weekly reports shall be prepared summarizing the results of the monitoring, behaviors observed, and actions taken, and shall be submitted to the USFWS. If nesting birds are found to exhibit signs of stress or if potential nest failure is suspected, CPL shall obtain authorization from the USFWS to have the nest either 					

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	relocated or removed by an approved professional. If construction activities are believed to be a direct cause of nest disturbance that may lead to nest failure, construction activities shall be temporarily halted and/or minimized until there is a resolution through one of the means discussed above, until fledging has occurred, or until resumption of construction activities is approved through consultation with the USFWS.					
	MM BIO-3: Wildlife Exclusion Fencing. The contractor shall install salt marsh harvest mouse exclusion fencing around the North Work Area under the supervision of the biological monitor. Fencing shall be installed immediately when water levels in the pond allow access to the North Work Area. Unidirectional escape routes shall be installed in the fencing to allow any animals to escape the Project area during construction activities if they are in the work area. The biological monitor shall check the fence at regular intervals to monitor proper installation and report maintenance needs and check for the presence of wildlife. Fence inspection intervals shall be based on the planned construction activities, recent and forecasted weather events, and the results of pre-construction surveys and previous fence checks.	North Work Area	Retain biological monitors' records and documentation of any subsequent maintenance activities	At initiation of construction in May	Applicant and CSLC	Wildlife excluded from Project area
Temporary habitat disturbance	MM BIO-4: Migratory Bird Avoidance. Between February 1 and February 15 (between the end of waterfowl hunting season when the North Work Area flooded and prior to the start of the migratory bird nesting season when flooding ceases), Chevron Pipe Line Company (CPL) shall initiate ground disturbance activities in the North Work Area. After a pre-activity survey (MM BIO-2), the contractor shall trim (using hand tools) the existing vegetation within the work area (as needed to facilitate the placement of filter fabric) and a 50-foot buffer around the work area, overlay filter fabric,	North Work Area	Obtain monitoring results summarized in monthly reports provided to CSLC staff during construction	February 1 to 15	Applicant and CSLC	Migratory birds avoided throughout construction

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	and potentially install the first layer of base rock for the North Work Area pad. This effort during the non-breeding season, and immediately following the end of the flooding period, shall make the North Work Area unattractive to nesting birds during the nesting season (as well as salt marsh harvest mice that may be moving into the area). Bird deterrents (i.e., foil streamers, decoys, noise) shall be installed in consultation with the resources agencies to detract nesting birds from the Project area and the surrounding area. CPL shall monitor the effectiveness of the deterrents, make regular inspections of the North Work Area, and make modifications to the deterrents as necessary. At least 48 hours prior to installation of the temporary borehole tracking system (e.g., wire coil), a qualified biologist shall complete a nest survey within terrestrial environments along the Horizontal Directional Drilling alignment. Any observed nest will be marked and identified in the field. During the installation of the surface tracking system, a qualified biologist shall accompany the construction personnel to ensure identified nests are avoided along the walking path and placement of the wire. Any nest markings shall be removed by the qualified biologist during the removal of the wire coil tracking system. Monitoring results shall be summarized in a memorandum and provided to California State Lands Commission staff during construction.					
	MM BIO-5: North Work Area Vegetation Impact Minimization Plan. At least 2 weeks prior to the start of construction, Chevron Pipe Line Company shall submit to California State Lands Commission (CSLC) staff for approval, and shall subsequently implement, a North Work Area Vegetation Impact Minimization Plan. The Plan shall include at least the following elements. <ul style="list-style-type: none"> The North Work Area shall not be graded for construction of the pad. 	North Work Area	Implement approved Plan	Throughout construction	Applicant and CSLC	Impacts to vegetation at the North Work Area are minimized

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<ul style="list-style-type: none"> In order to preserve the roots and seedbank of plant species, vegetation shall be trimmed with hand tools to just above ground level in the work area (as needed) as well as in a 50-foot buffer, leaving rootstock in place. The trimmed material shall be left in place on the ground or stockpiled to be replaced after removal of the pad materials at the end of construction. Per MM BIO-2, pre-construction surveys and biological monitoring shall be conducted during vegetation trimming. Vegetation shall only be excavated in the drill entry and tie-in pit (maximum size 10 feet by 12 feet by 6 feet). Vegetation and soil from the excavated pit shall be salvaged and stockpiled separately to be replaced during site restoration. 					
	<p>MM BIO-6: Revegetation and Monitoring Plan. Following completion of Project construction, Chevron Pipe Line Company (CPL) shall restore the area to pre-Project conditions in accordance with a Revegetation and Monitoring Plan. At least 2 weeks prior to conclusion of construction, CPL shall submit the Plan to California State Lands Commission (CSLC) staff for approval. The Plan shall include details for site preparation and revegetation methods, monitoring, performance criteria, and reporting. These elements are subject to modification through consultation with natural resource agencies.</p> <ul style="list-style-type: none"> Site Preparation and Revegetation: All equipment, geotextile mats, rock fill, and filter fabric shall be removed. Any stockpiled native vegetation trimmings (that were trimmed at the beginning of construction) shall be reapplied over temporarily disturbed wetlands to provide temporary soil protection and as a seed source. The drill pit shall be backfilled with the stockpiled material originally excavated from the pit. Subsoil shall be replaced in the pit and compacted 	North Work Area	Annual reports and a final monitoring report by December 31 of each monitoring year (until monitoring obligations are complete) or as determined in coordination with the natural resource agencies	Throughout construction with monitoring occurring annually for the first 3 to 5 years following revegetation (expected to be 2018 to 2022) with a provision that cessation of monitoring may be requested by CPL if	Applicant and CSLC with input from, the San Francisco Bay Conservation and Development Commission, California Department of Fish and Wildlife, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and U.S. Fish	Impacts to vegetation at the North Work Area are minimized and pre-construction condition restored to agreed upon end-points

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<p>with machinery. After proper backfilling of the subsoil, the upper 6 inches of topsoil shall be replaced and spread evenly over the pit. Topsoil shall not be mixed with subsoil or used to fill the pit. The contractor shall also apply appropriate erosion control treatment as needed to any disturbed ground prior to the end of the construction season.</p> <ul style="list-style-type: none"> • Monitoring: After construction, a qualified biologist shall monitor the hydrologic conditions and the vegetation cover and composition. Monitoring shall occur annually for the first 3 to 5 years following revegetation (expected to be 2018 to 2022) with a provision that cessation of monitoring may be requested by CPL if performance criteria for year 5 is met earlier. Restored areas shall be monitored to achieve end-points as agreed upon with the agencies. • Performance Criteria: Revegetation of wetlands shall be deemed successful if total plant cover is greater than 70 percent of adjacent undisturbed areas, at least 1-3 dominant species are presented, and there is no increasing trend in invasive, non-native species relative to the adjacent undisturbed areas. Performance criteria may be revised at the request and in consultation with natural resource agencies. • Reporting: Annual reports and a final monitoring report shall be submitted to the CSLC staff by December 31 of each monitoring year (until CSLC monitoring obligations are complete) or as determined in coordination with natural resources agencies. At their request, copies shall also be provided to San Francisco Bay Conservation and Development Commission, California Department of Fish and Wildlife, Regional Water Quality Control 			performance criteria for year 5 is met earlier	and Wildlife Service staffs	

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Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	Board, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service staffs.					
	MM BIO-7: Emergent Wetland Vegetation Avoidance. Installation of the temporary borehole tracking system (e.g., wire coils) shall be conducted from vessels in open water areas in a manner that avoids driving over or through emergent wetland vegetation. The biological monitor shall provide recommendations for personnel access for the installation and alignment of the tracking system around emergent wetland vegetation in a manner that reduces or minimizes impacts on emergent wetland vegetation. A biological monitor may be present on the vessel or onshore during the installation of the wire coil to point out and document avoidance of the emergent wetland vegetation. A biological monitor may be present on the vessel or onshore during the installation of the wire coil to point out and document avoidance of the emergent wetland vegetation. Monitoring results shall be summarized in a memorandum and provided to California State Lands Commission staff during construction.	Pipeline alignment	Retain biological monitors' memorandum including records and documentation of avoidance and minimization of impacts	During installation and de-mobilization of the borehole tracking system	Applicant and CSLC	Emergent wetland vegetation avoided and/or impacts minimized
Night-lighting	Implement the following measure (see below): MM AES-1: Night-lighting Spillage Minimization					
Turbidity and sedimentation	MM BIO-8: Turbidity and Sedimentation Minimization. Sediment suspension shall be minimized when removing piles. Measures to accomplish this shall include, but are not limited to, the following: <ul style="list-style-type: none"> • When practicable, piles shall be removed with a vibratory hammer. • Piles shall be removed slowly to allow sediment to slough off at, or near, the mudline. • Excess mud that may cling to the extracted piles shall not be washed into the bay. 	South Work Area	On-site monitor to verify	Throughout construction	Applicant and CSLC	Turbidity and sedimentation minimized

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<ul style="list-style-type: none"> Removed piles shall be placed on a barge equipped with a basin to contain attached sediment and runoff water after removal. 					
	Also implement the following measure (see below): MM HWQ-1: Stormwater Pollution Prevention Plan (SWPPP)					
Accidental spills	Implement the following measure (see below): MM HWQ-1: Stormwater Pollution Prevention Plan (SWPPP)					
Underwater noise	MM BIO-9: Pile Driving Soft-Start Technique. A soft start for vibratory drivers requires contractors to initiate the driver at a reduced energy for 15 seconds followed by a 30-second waiting period; this procedure is then repeated two additional times. A soft start for impact drivers requires contractors to provide an initial set of strikes at a reduced energy followed by a 30-second waiting period; this procedure is then repeated two additional times. A soft start shall be implemented before pile driving begins each day and any time following the cessation of pile driving for 30 minutes or longer.	South Work Area	On-site monitor to verify	During construction of temporary trestle	Applicant and CSLC	Soft-start alerts wildlife of pile driving operations prior to full implementation
Riparian habitat/other sensitive natural communities	Implement the following measures (see above and below): MM BIO-5: North Work Area Vegetation Impact Minimization Plan MM HWQ-1: Stormwater Pollution Prevention Plan (SWPPP)					
Wetlands and other waters	Implement the following measure (see above): MM BIO-7: Emergent Wetland Vegetation Avoidance					
Conflict with local policies or plans protecting biological resources	Implement the following measures (see above): MM BIO-1: Environmental Awareness Training MM BIO-2: Biological Monitoring and Surveying MM BIO-3: Wildlife Exclusion Fencing MM BIO-4: Migratory Bird Avoidance MM BIO-5: North Work Area Vegetation Impact Minimization Plan MM BIO-6: Revegetation and Monitoring Plan MM BIO-7: Emergent Wetland Vegetation Avoidance					

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Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	MM BIO-8: Turbidity and Sedimentation Minimization MM BIO-9: Pile Driving Soft-Start Technique					
Conflict with an adopted or approved conservation plan	Implement the following measures (see above): MM BIO-1: Environmental Awareness Training MM BIO-2: Biological Monitoring and Surveying MM BIO-3: Wildlife Exclusion Fencing MM BIO-4: Migratory Bird Avoidance MM BIO-5: North Work Area Vegetation Impact Minimization Plan MM BIO-6: Revegetation and Monitoring Plan MM BIO-7: Emergent Wetland Vegetation Avoidance MM BIO-8: Turbidity and Sedimentation Minimization MM BIO-9: Pile Driving Soft-Start Technique					
Cultural Resources						
Disturbance of historical resources	MM CUL-1: Discovery of Previously Unknown Cultural Resources. In the event that potentially significant archaeological or tribal cultural resources are discovered any time during construction, all earth-disturbing work within 100 feet of the discovery shall be temporarily suspended or redirected until a professional archaeologist and a culturally affiliated tribal monitor, have evaluated the nature and significance of the discovery. In the event that a potentially significant archaeological or tribal cultural resource is discovered, Chevron Pipe Line Company, the California State Lands Commission (CSLC), and any local, state, or federal agency with approval or permitting authority over the Project that has requested/required such notification shall be notified within 48 hours. Impacts to previously unknown significant archaeological or tribal cultural resources shall be avoided through preservation in place if feasible. Damaging effects to tribal cultural resources shall be avoided or minimized following the measures identified in Public Resources Code section 21084.3, subdivision (b), if feasible, unless other measures are	North Work Area	Inform Project contractors of archaeological resource notification procedure Document any reported finds including retention of any associated archaeological reports	Throughout construction	Applicant and CSLC	Any unanticipated cultural resource finds are avoided until evaluated and mitigated

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	mutually agreed to by the lead archaeologist and culturally affiliated tribal monitor that would be as or more effective. A treatment plan developed by the archaeologist and, for tribal cultural resources, the culturally affiliated tribal monitor, shall be submitted to CSLC staff for review and approval. If the lead archaeologist and the culturally affiliated tribal monitor believe that damaging effects to tribal cultural resources will be avoided or minimized, then work in the area may resume.					
Disturbance of archaeological resources	Implement the following measure (see above): MM CUL-1: Discovery of Previously Unknown Cultural Resources					
Disturbance of paleontological resources	MM CUL-2: Discovery of Previously Unknown Paleontological Resources. In the event that potentially significant paleontological resources are discovered during Project construction: (1) Chevron Pipe Line Company (CPL) shall immediately redirect or temporarily suspend all earth-disturbing work within 100 feet of the discovery until a professional paleontologist, approved by California State Lands Commission (CSLC) staff, has evaluated the nature and significance of the discovery; and (2) CPL shall immediately notify (within 48 hours) CSLC staff and any local, state, or federal agency with approval or permitting authority over the Project that has requested/required such notification. A treatment plan developed by the paleontologist shall be submitted to CSLC staff for review and approval. If the lead paleontologist believes that damaging effects to paleontological resources will be avoided or minimized, then work in the area may resume.	North Work Area	Retain paleontologist and resulting report	Throughout construction	Applicant and CSLC	Paleontological resources are avoided or appropriately mitigated (e.g., collected and curated)

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Disturbance of human remains	MM CUL-3: Unanticipated Discovery of Human Remains. If human remains are unearthed, State Health and Safety Code section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. Chevron Pipe Line Company and California State Lands Commission staff shall be notified immediately within 24 hours of the discovery.	North Work Area	Retain record of any finds that are investigated as possible human remains	Throughout construction	Applicant and CSLC	Any human remains encountered on the Project site are appropriately managed
Hazards and Hazardous Materials						
Release of hazardous materials into the environment	MM HAZ-1: Oil Spill Response Plan (OSRP). Chevron Pipe Line Company shall submit a Project-specific OSRP to California State Lands Commission staff 30 days prior to start of Project activities for review and approval. At a minimum, the Project-specific OSRP shall: <ul style="list-style-type: none"> Clearly identify the responsibilities of onshore and offshore contractors prior to and during an unanticipated release of oil or other hydrocarbon; List and identify the location(s) of oil spill response equipment (including booms) onshore and offshore onboard Project vessels; List response times for deployment; Require that petroleum-fueled equipment on the main deck of all vessels have drip pans or other means of collecting dripped petroleum, which shall be collected and treated with onboard equipment; Require the primary work vessel to carry on board a minimum 400 feet of sorbent boom, five bales of sorbent pads at least 18-inch by 18-inch square, and small powered boat for rapid deployment to contain 	North and South Work Areas	OSRP and daily compliance	At least 30 days prior to commencement of Project activities and throughout construction	Applicant and CSLC	Avoid or reduce potential impacts to water or soil

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	<p>and clean up any small spill or sheen on the water surface;</p> <ul style="list-style-type: none"> • Ensure that contracts with off-site spill response companies are in place prior to start of Project activities; and • Provide for additional containment and clean-up resources as needed. 					
	<p>MM HAZ-2: Pipeline Cleaning and Containment. Prior to cutting and tie-in activities, the existing pipeline shall be pigged and flushed to remove residual petroleum products. This work would begin at a valve location in Pittsburg and continue to another valve location near Highway 113 or at Birds Landing. The water and cleaning agent used to flush the pipe shall be recovered at the valve location near Highway 113 or at Birds Landings and disposed of at an appropriate facility. Although the line will be cleaned prior to cutting for the tie-in, secondary containment shall be set up at the North and South Work Areas as a precaution to prevent the accidental release of any material that may still remain inside the pipeline.</p>	North and South Work Areas	On-site monitor to verify	Prior to tie-in activities	Applicant and CSLC	An accidental release of hazardous material is avoided or responded to appropriately
	<p>MM HAZ-3: Inadvertent Return Contingency Plan. At least 30 days before Project implementation, Chevron Pipe Line Company shall submit to California State Lands Commission staff for review and approval, and shall subsequently implement in the event of an inadvertent return, a Final Inadvertent Return Contingency Plan for Horizontal Directional Drilling. The Inadvertent Return Contingency Plan shall ensure that preventive and responsive measures can be implemented by the contractor and shall include:</p> <ul style="list-style-type: none"> • Design protocols to be implemented for the protection of sensitive cultural and biological resources; • Design protocols to require a geotechnical engineer or qualified geologist to make recommendations regarding the suitability of the formations to be bored 	North and South Work Areas	Retain geotechnical engineer and/or qualified geologist documentation of design and drilling recommendations	At least 30 days prior to Project implementation and throughout horizontal directional drilling	Applicant and CSLC	Inadvertent returns prevented or responded to appropriately

Table C-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	to minimize the potential for inadvertent return conditions.					
	MM HAZ-4: Asbestos Handling Procedures. Construction personnel shall be informed of the potential presence of asbestos-containing material (ACM) at the construction site prior to their assignment. After exposing the existing pipeline and prior to start of cutting and tie-in activities, a certified asbestos inspector/ consultant shall test whether the coating consists of ACM greater than 1 percent by weight. If testing reveals the coating contains ACM less than 1 percent by weight, the pipe segment shall be treated as normal construction waste and no additional measures are required. If testing reveals the coating contains ACM greater than 1 percent by weight, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the Bay Area Air Quality Management District, and in accordance with applicable worker safety regulations. All ACM removed from the pipe segment shall be labeled, transported, and disposed of at a verified and approved ACM disposal facility.	North and South Work Areas	Confirm certified asbestos contractor Conduct site inspections to ensure certified personnel are conducting work	During tie-in activities	Applicant and CSLC	Asbestos-containing material appropriately handled to avoid health impacts
Hydrology and Water Quality						
Potential degradation of water quality	MM HWQ-1: Stormwater Pollution Prevention Plan (SWPPP). A SWPPP consistent with the Statewide National Pollution Discharge Elimination System Construction General Permit (Order No. 2012-0006-DWQ) shall be developed and implemented. The SWPPP shall detail the construction-phase erosion and sediment control best management practices (BMPs) and the housekeeping measures for control of contaminants other than sediment. Erosion control BMPs shall include source control measures such as wetting of dry and dusty surfaces to prevent fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas	North and South Work Areas	On-site monitor to verify	Throughout construction	Applicant and CSLC	Runoff pollutant releases and spills avoided or responded to appropriately

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Potential Impact	Mitigation Measure (MM)	Location	Monitoring/Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water. Sediment control BMPs shall include measures such as installation of fiber rolls and sediment basins to capture and remove particles that have already been dislodged. The SWPPP shall establish good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials, and waste management BMPs, which shall include procedural and structural measures to prevent the release of wastes and materials used at the site. The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill.					
	<p>MM HWQ-2: Hydrostatic Test Water Disposal. Once hydrostatic testing is complete, the water shall be transferred to water storage tanks, tested, and discharged or disposed of as follows:</p> <ul style="list-style-type: none"> • If results from testing allow, the water shall either be discharged to surrounding waters in accordance with the requirements of the Statewide Construction General Permit for Stormwater Discharges Associated with Construction Activity or discharged to land in accordance with the State Water Resources Control Board's Statewide National Pollutant Discharge Elimination System General Permit (Order 2003-0003-DWQ) for below-threat water quality discharges to land. • If a permit cannot be obtained, or if testing indicates the water contains contaminants in excess of permitted levels, the water shall be hauled off site for disposal at a permitted commercial disposal facility. 	North and South Work Areas	On-site monitor to verify	Before and after pipeline installation	Applicant and CSLC	Discharge of hydrostatic testing water to land or water avoided and disposed of appropriately
	<p>Also implement the following measure (see above):</p> <p>MM BIO-8: Turbidity and Sedimentation Minimization</p>					

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Potential Impact	Mitigation Measure (MM)	Location	Monitoring/ Reporting Action	Timing	Responsible Party	Effectiveness Criteria
<i>Land Use and Planning</i>						
Conflict with any applicable land use plan, policy, or regulation	Implement the following measures (see above): MM BIO-1: Environmental Awareness Training MM BIO-2: Biological Monitoring and Surveying MM BIO-3: Wildlife Exclusion Fencing MM BIO-4: Migratory Bird Avoidance MM BIO-5: North Work Area Vegetation Impact Minimization Plan MM BIO-6: Revegetation and Monitoring Plan MM BIO-7: Emergent Wetland Vegetation Avoidance MM BIO-8: Turbidity and Sedimentation Minimization MM BIO-9: Pile Driving Soft-Start Technique					